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AMERICAN SCHOOL HEALTH ASSOCIATION

Organized 1927

Devoted to the interests and advancement of those engaged in school health activities and the service rendered by them

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SHOULD VITAMIN D BE GIVEN ONLY TO INFANTS?

VITAMIN D has been so successful in preventing rickets during infancy that there has been little emphasis on continuing its use after the second year.

But now a careful histologic study has been made which reveals a startlingly high incidence of rickets in children 2 to 14 years old. Follis, Jackson, Eliot, and Park* report that postmortem examination of 230 children of this age group showed the total prevalence of rickets to be 46.5%.

Rachitic changes were present as late as the fourteenth year, and the incidence was higher among children dying from acute disease than in those dying of chronic disease.

The authors conclude, "We doubt if slight degrees of rickets, such as we found in many of our children, interfere with health and development, but our studies as a whole afford reason to prolong administration of vitamin D to the age limit of our study, the fourteenth year, and especially indicate the necessity to suspect and to take the necessary measures to guard against rickets in sick children."

*R. H. Follis, D. Jackson, M. M. Eliot, and E. A. Park: Prevalence of rickets in children between two and fourteen years of age, Am. J. Dis. Child. 66:1-11, July 1943.

MEAD'S Oleum Percomorphum With Other Fish-Liver Oils and Viosterol is a potent source of vitamins A and D, which is well taken by older children because it can be given in small dosage or capsule form. This ease of administration favors continued year-round use, including periods of illness.

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THE JOURNAL OF SCHOOL HEALTH

Devoted to the interests and advancement of school health service and instruction. Your participation by membership is solicited.

Vol. XVIII SEPTEMBER, 1948 No. 7

ADMINISTRATION OF SCHOOL HEALTH SERVICES*

CYRUS H. MAXWELL, M.D.,

Chief, Administration of School and College Health Services, U. S. Office of Education

Repeatedly the question is raised as to which trend the administration of school health work is taking — is it toward the health departments or toward boards of education? A short review of the literature may not show any marked trend one way or the other, but does show an encouraging increase in interest in school health by both school and health authorities, particularly by the latter.

The medical and dental professions, school authorities, health departments, and other official and non-official agencies such as Parent Teachers' Associations have been working in joint committees and in other ways to bring about closer coordination of the school health program with the general community health program and with resulting improvement of both — certainly a desirable "trend".

In discussing the history of the school health program, Keene[1] states, "In practically all foreign countries it" (the administration of school health services) "rests in the national board of education, and always has so rested. In the United States, whereas the work was started as a board of health activity, it has gradually become, because of the broadening scope and because of the better organization of those in control of the schools, a board of education function, so that at the present time the vast majority of the communities carry on this activity under the board of education."

Twenty-six States had laws on school medical inspection or health service in 1915[2]. The responsibility for administration was placed on school authorities in 18 States, on health authorities in two States, on either in one State. In five States the responsibility was not stated. No statement is made as to whether this is State or local responsibility.

1. *Physical Welfare of the School Child.* Keene, Charles H., M.D., Boston, Houghton, Mifflin Company, 1929.
2. U. S. Office of Education. *Report of the Commissioner of Education for* 1915. Washington, U. S. Government Printing Office, 1915, p. 419.

* School Life, May 1948, page 6.

Legal Responsibility—State Administration

World War I gave impetus to the school health legislation and by 1920, thirty-nine States had laws making mandatory or permissive school health services.

Information is available to indicate where the responsibility has been placed from 1920 to 1945 in State and local levels. Table I gives the State authority shown by various studies since 1920.

TABLE 1.—RESPONSIBILITY FOR ADMINISTRATION OF SCHOOL HEALTH SERVICE BY NUMBER OF STATES IN SPECIFIED YEARS

Department responsible	1920[1]	1934[2]	1941[3]	1946[4]
1	2	3	4	5
Education	11	12	11	11
Health[5]	6	11	8	8
Joint	9	9	11	13
Not stated	13	16	17	13
Education and welfare			1	1
Total	39	48	48	46

1. U. S. Office of Education. *Biennial Survey of Education,* 1920-1922. Washington, U. S. Government Printing Office, p. 163.
2. U. S. Office of Education. *State-Wide Trends in School Hygiene and Physical Education.* By James F. Rogers. Washington, U. S. Government Printing Office, 1934. p. 14.
3. U. S. Office of Education. *State-Wide Trends in School Hygiene and Physical Education.* By James F. Rogers. Washington, U. S. Government Printing Office, 1941. p. 12.
4. U. S. Office of Education. *State Administration of School Health, Physical Education and Recreation.* By Frank S. Stafford. Washington, U. S. Government Printing Office, 1947. p. 22. (Bulletin 1947, No. 13.)
5. State authority, especially as regards the department of health, is seldom more than that of preparing blanks for examinations.

No particular trend toward one or the other authority is shown by this table.

Legal Responsibility—Local Administration

A summary of the legal authority for local administration in the States in the past 28 years is shown in Table II.

Certainly the overwhelming number places the responsibility on the local schools to provide the health service.

TABLE II.—LOCAL ADMINISTRATION OF SCHOOL HEALTH SERVICES BY NUMBER OF STATES FOR SPECIFIED YEARS.

Responsible authority	1920[1]	1934[2]	1941[3]	1946[4]
1	2	3	4	5
Education	24	30	33	34
Health	4	7	4	4
Joint	4	1	2	2
Either	2		1	1
Not stated	2	9	7	4

Health or joint	1			
Education or joint	1			
County court		1	1	1
Education or health (varies with size)	1			
Total	39	48	48	46

1. U. S. Office of Education. *Biennial Survey of Education,* 1920-22. Washington, U. S. Government Printing Office. p. 163.
2. U. S. Office of Education. *State-Wide Trends in Hygiene and Physical Education.* By James F. Rogers. Washington, U. S. Government Printing Office, 1934. p. 14.
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4. U. S. Office of Education. *State Administration of School Health, Physical Education and Recreation.* By Frank S. Stafford. Washington, Government Printing Office, 1947. p. 22. (Bulletin 1947, No. 13.)

School Health Services in Cities

The responsibility for the administration of school health services in cities is shown in small, medium-sized, and large cities separately, in Tables III, IV, and V.

TABLE III.—ADMINISTRATION OF SCHOOL HEALTH SERVICES IN CITIES FROM 10,000 TO 30,000 POPULATION FOR SPECIFIED YEARS, BY PERCENT.

Responsible agency	1922[1]	1930[2]	1940[3]
1	2	3	4
Education	77.3	76	75
Health	9.2	16	9
Joint	11.0	5	16
Private	1.2	2	
Not stated	1.2		
Education or health and private		1	
Total	99.9	100	100

1. Report of Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association, New York, 1922. p. 4. (This column is limited to cities of 10,000 to 25,000 population.)
2. U. S. Office of Education. *School Health Activities in* 1930. By James F. Rogers. Washington, U. S. Government Printing Office, 1931. (Pamphlet No. 21.)
3. U. S. Office of Education. *Health Services in City Schools.* By James F. Rogers. Washington, U. S. Government Printing Office, 1942.

No particular trend is shown in the matter of administrative controls.

There is a slight trend toward health department administration in the group of cities shown in Table IV, but the administration is still largely under boards of education.

TABLE IV.—ADMINISTRATION OF SCHOOL HEALTH SERVICES IN CITIES FROM 25,000 TO 100,000 POPULATION FOR SPECIFIED YEARS, BY PERCENT.

Responsible agency	1922[1]	1930[2]	1940[3]
1	2	3	4
Education	77	78	71
Health	10	14	23
Joint	10	5	6
Private	2	.....	.....
Education, health and other	.....	2	.....
Not stated	1	.....	.....
Health and other	.....	1	.....
Total	100	100	100

1. Report of Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association, New York, 1922. p. 4.

2. U. S. Office of Education. *School Health Activities in* 1930. By James F. Rogers. Washington, U. S. Government Printing Office, 1931. (Pamphlet No. 21.) (This column is limited to cities of 30,000 to 100,000 population.)

3. U. S. Office of Education. *Health Services in City Schools.* By James F. Rogers. Washington, U. S. Government Printing Office, 1942. (This column is limited to cities of 30,000 to 100,000 population.)

TABLE V.—ADMINISTRATION OF SCHOOL HEALTH SERVICES IN CITIES OF 100,000 OR MORE POPULATION FOR SPECIFIED YEARS, BY PERCENT.

Responsible authority	1922[1]	1930[2]	1940[3]
1	2	3	4
Education	51	60	70
Health	27	26	20
Joint	22	14	10

1. Report of Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association, New York, 1922. p. 4.

2. U. S. Office of Education. *School Health Activities in* 1930. By James F. Rogers. Washington, U. S. Government Printing Office, 1931. (Pamphlet No. 21.)

3. U. S. Office of Education. *Health Services in City Schools.* By James F. Rogers. Washington, U. S. Government Printing Office, 1942.

The apparent trend toward education authority in 1940 may be partly accounted for by the addition in 1940 "to cities of the first-class from the second, which in 1930 had a proportion of 78 percent administered by the department of education."[3]

Wheatley[4] summarizes the administration in the cities of various sizes in the following table:

3. U. S. Office of Education. *Health Services in City Schools.* By James F. Rogers. Washington, U. S. Government Printing Office, 1942.

4. Wheatley, George M. *The Physician and School Medical Services.* New England Journal of Medicine, 236 : 305-310, Feb. 27, 1947.

TABLE VI.—RESPONSIBILITY FOR ADMINISTRATION OF SCHOOL HEALTH SERVICE IN URBAN COMMUNITIES, BY POPULATION GROUP[1].

Responsible agent	Over 100,000		30,000-99,999		10,000-29,999	
	Number	Percent	Number	Percent	Number	Percent
1	2	3	4	5	6	7
Board of education	47	65	114	71	345	75
Health department	22	31	36	23	41	9
Joint	3	4	9	6	75	16

1. Based on data contained in a study, "Present Status of School Health Service and the Necessity for Health-Department Participation," presented at a meeting of the Association of State and Territorial Health Officers, Washington, D. C., April 12, 1945.

Employment of Public Health Nurses by Various Agencies

The trend in the employment of public health nurses by various agencies may be obtained from the following table prepared from tables by Heisler.[5]

5. Heisler, Anna. *The 1946 Census of Public Health Nurses.* Public Health Nursing, 38 : 519-522, October, 1946.

Heisler, Anna. *The 1947 Census of Public Health Nurses.* Public Health Nursing, 39 : 503-505, October, 1947.

TABLE VII.—TOTAL NUMBER OF NURSES EMPLOYED FOR PUBLIC HEALTH WORK IN THE UNITED STATES, HAWAII, ALASKA, PUERTO RICO, AND THE VIRGIN ISLANDS AND RESPONSIBLE AGENCY ON JANUARY 1, 1942 AND 1947.

Responsible agency	1942	1947	Percent change
1	2	3	4
Grand total[1]	21,123	21,449	+ 1.8
State agencies	864	993	+14.9
Local official agencies:			
Rural	4,971	4,590	— 7.7
Urban	5,640	5,928	+ 5.1
Local boards of education	3,913	4,637	+18.5
Local non-official agencies	5,590	5,023	— 8.3

Schools of nursing[2]	.....	102	.....
National agencies[3] and universities	145	226	+55.2
Number of counties having no nurses engaged in full-time public health work in rural areas	782	1,087	+39.0
Number of incorporated cities and towns (population 10,000 or more) having no nurses engaged in full-time public health work	32	18	—43.7

1. Exclusive of industrial nurses.
2. Data available for 1946 and 1947.
3. A considerable number of nurses employed by the American Red Cross are engaged in activities that are not strictly public health nursing.

The increase in nurses employed by local boards of education points to the popularity of the public health nursing program with school administrators. While the combined total of public health nurses employed by rural and urban official agencies decreased 0.9 percent, the nurses employed by boards of education increased 18.5 percent.

The school authorities have apparently done a better job of recruiting public health nurses[6] from 1942 to 1947 than have the other local official agencies.

The serious shortage of public health nurses in rural areas is manifest from this table, although the number of counties having no nurses engaged in full-time public health work in rural areas decreased from 1946 to 1947. The shortage suggests the need for full-time local county health units and increases in salaries for nurses working in the rural areas.

Financing School Health Programs

The tendency for cooperation between the health departments and education departments is shown by the fact that some of the boards of education delegated the administration of the service to the health departments even when the financing was by the board of education or jointly with the health departments. The financing of the health services in cities is shown in the following table:[7]

6. School nursing is considered a branch of public health nursing in this article.
7. Rogers, op. cit.

TABLE VIII.—AGENCY RESPONSIBLE FOR FINANCING SCHOOL HEALTH SERVICES IN CITIES WITH POPULATION FROM 10,000 TO 100,000.

Financing agent	Over 100,000		30,000-99,999		10,000-29,999	
	Number	Percent	Number	Percent	Number	Percent
1	2	3	4	5	6	7
Board of education	50	71	112	70	365	77
Health department	18	25	35	21	32	7
Joint	4	5	9	6	51	11
County	.....	.....	.....	.....	17	4
Organizations	.....	.....	.....	.....	6	1

Summary

The administration and financing of the school health program is still overwhelmingly under education authority, especially on the local level, and shows no particular trend toward a change in administration. The increasing interest and cooperation of school and health authorities in the school health program and the general acceptance of the principle that the "education departments should have * * * administrative responsibility for the conduct of all activities taking place in the schools, without regard to which agency operates the program of health examination services"[8] augur well for a continuing improvement of the health of our school children.*

8. School Health Section Council, American Public Health Association. *Principles for Consideration in Judging the Probable Effectiveness of Federal Legislation Designed to Improve the Health of Children of School Age.* New York, N. Y. (1790 Broadway), Jan. 9, 1948.

*See page 199, *Resolution* adopted by the California Division of the American School Health Association.

EYE INJURY DUE TO ECLIPSE*

PAUL TOWER, M.D.
Los Angeles, Calif.

Everyone loves to watch the fascinating spectacle of a solar eclipse, like the one that happened on November 12th of last year. First the moon obscures a small, spindle-shaped segment of the sun, but then the shadow moves on relentlessly, until the sun is blotted out, and only a few fiery tongues reach out from behind the black disk. For a while, the source of light is obscured, but slowly the sun emerges from the shadow, and the air is again filled with its brilliant rays.

It is no wonder that people like to watch this celestial pageant and, armed with pieces of smoked glass, sun glasses, or photographic film, they gaze into the sun.

That is where the pleasure ends and a new chapter begins, dealing with danger to health and happiness of those who watch the sun during an eclipse.

After the eclipse of last November, children began to complain of poor vision, or of black spots before the eyes. They were brought to the Eye Department of Yale Street Health Center in Los Angeles, where their eyes were subjected to careful ophthalmologic examination. It proved that the infra-red rays of the sun, which are the heat rays, had caused severe burns on the background of these children's eyes. Since the day of the eclipse about seven months have passed, and 32 pupils have come to the clinic, all with more or less the same symptoms, and all of them telling the identical story of how it all happened. More youngsters keep straggling in as time goes by.

The first strange thing these children noted was that the image of the sun, encircled by a luminous corona, which they had been watching, remained before their eyes for a long time after they had ceased looking at the eclipse. Only the picture was reversed, the disk of the sun now being bright, and the corona dark. A little later, one or several black spots appeared before the eyes, blotting out part of the visual field, and all familiar objects seemed to be distorted out of their ordinary shape. Furthermore, the sick eye had suddenly lost its normal range of vision and felt weak.

The important thing to remember is that these children are just a few out of the doubtless much greater number who were seriously injured by the sun that day in November. But eclipses

* From the Eye Department, Yale Street Health Center, Los Angeles City Board of Education.

occur almost every year, and all over the country there are health centers with eye departments where the story of this particular eye clinic can be duplicated far too many times to allow such a hazard to continue unchecked.

School records of all children showed that before the day of the eclipse their vision had been normal. But when they realized that something was wrong with their eyes and came to the eye clinic, their condition was diagnosed as "solar retinitis" or "eclipse blindness," and a considerable reduction of vision was found to have taken place.

It has been known from times immemorial that injury will result whenever the interior chamber of the eye is exposed for any length of time to the direct rays of the sun. This danger is so grave because the eye is safeguarded against many other kinds of injuries by protective mechanisms, but not against the danger of lengthy exposure to the direct rays of the sun during an eclipse.

Only at sunrise and sunset may the unprotected eye be focused on the sun, without experiencing discomfort. At those times the solar rays travel for such a great distance through the atmosphere that their intensity is diminished and remains within safe limits. A similar *impression* of twilight is created during an eclipse of the sun. But in contrast to conditions existing at sunrise and sunset, the rays of that part of the sun which is not covered by the moon travel only through a relatively thin layer of atmosphere. These rays are, therefore, as injurious to the eye as the sunlight at high noon, radiating from the entire disk. It is this discrepancy between great radiating power and apparent twilight which is responsible for the misjudgment of the danger inherent in a solar eclipse.

As a matter of fact, during an eclipse the rays of the sun are so strong that prolonged observation is dangerous, even if the eye is seemingly protected by smoked glass, photographic film, or sun glasses. Smoked glass is useless, because soot is easily rubbed from its smooth surface. The use of photographic film is not a safe measure either, although it is probably not quite as poor a protection as smoked glass. Ordinary commercial sun glasses are unable to safeguard the eye effectively against heat rays and adequate protection cannot even be guaranteed through the use of special glasses.

After the infra-red rays of the sun have been allowed to penetrate for any length of time into the delicate inner structures of the eye, they give rise to what is called a "thermal lesion," involv-

ing not only one, but several layers of the globe. This gives an idea how strong and piercing the supposedly feeble rays of the partially obscured sun really are. In most cases, these burns are of a permanent nature, although after a certain length of time, vision has improved in some instances and the black spots before the eyes have again disappeared.

It may be that geographical location as well as atmospheric conditions of the place where the eclipse is observed have something to do with the resulting damage. From San Francisco it was reported that out of 23 children only two suffered permanent injury, while all others recovered. But the 32 cases of our report happened in Los Angeles and only in two of them did vision improve to some extent within seven months after the accident. Mostly, one eye was found to be injured, but six children had suffered permanent burns in both eyes.

Sometimes the lesion in the eye will take the shape of the bright ring around the dark shadow covering the sun, so that it represents an actual picture of the fiery circle which has engraved itself on the interior layers of the eye.

It may seem surprising that anyone should be immune to solar retinitis with its grave after-effects. The answer is that light rays as well as heat rays do not penetrate with equal intensity through the various layers of the eyes of all individuals. The difference is mainly a question of age, as with advancing years the optic lens through which the rays must pass becomes increasingly more opaque. It is for this reason that solar retinitis due to exposure during an eclipse is most frequently observed in children and young adults, and assumes its gravest form among children of school age. The length of time during which the eye has been exposed is another decisive factor for the severity of the lesion.

It should be mentioned in passing that the danger of burns on the fundus of the eye is not only present during an eclipse. A woman who had been spending a pleasant afternoon at the beach watching the clouds sail over the sun and the sun dipping in and out of hiding, noticed that she could not see very well when she finally prepared to drive home. When her eyes were examined on the following day, she was found to suffer from solar retinitis, with severely burned patches visible in the interior chambers of both eyes.

As so little can be done in order to restore vision to its previous state, prophylaxis is the best protection. Parents and teachers should become aware of the threat of permanent injury to the eyes of children. And before the next eclipse timely warning and in-

struction might be organized by alert local school and health departments.

One of the best precautions may still be the very same safety measure which Plato recommended over twenty-three centuries ago and which has again been suggested in a recent book by an eye specialist. Says Plato, "People may injure their bodily eye by observing and gazing on the sun during an eclipse, unless they take the precaution of only looking at the image reflected in the water, or in some similar medium."

* * * * *

Tuberculin Control.—In 1939 the Norwegian Association of Tuberculosis Doctors recommended tuberculin testing and registration of everyone up to the age of 30. On the West Coast of Norway, Dr. Tobias Gedde-Dahl, recently appointed as secretary-general of the Norwegian National Association against Tuberculosis, has shown that this recommendation can be translated into remarkably effective action. From 1937 onward he has worked as district medical officer in an area with a population of about 6,500. Using the Pirquet test, he kept the negative reactors under subsequent periodic tuberculin control, while the positive reactors were kept under radiologic control. He has now published his results in a 235-page work entitled "Tuberculosis Infection in the Light of Tuberculin Registration." A twelve-page summary in English is a concession to readers who do not know the Norwegian language and to those Norwegians who like their reading condensed. During the observation period 1937-1944, Dr. Gedde-Dahl found that the overwhelming majority of the population in his district was still tuberculin-negative at the age of 15: about 80 per cent of the urban population and about 85 per cent of the rural. Even at the age of 30, about 30 per cent of the men and about 45 per cent of the women had not yet been infected. Hence, the conclusion that tuberculin control must be extended far beyond the age of 30. Another conclusion was that few children are infected in their homes; many sources of infection are to be found outside them. *Dr. Gedde-Dahl has found Pirquet testing far more effective than mass roentgenography as the first step in the discovery of new cases, and he prefers to make the latter subservient to the former, roentgenography to be reserved for tuberculin-positive reactors**. During the period under review, the percentage of traced cases of progressive pulmonary tuberculosis in his district rose, but the mortality from pulmonary tuberculosis fell in the same period from 10.8 to 5.7 per ten thousand persons and that from all forms of tuberculosis from 13.5 to 6.4. Journ. A.M.A., June 26, 1948. p. 805.

* Italics are Editorial—C. H. K.

INTEGRATED SCHOOL HEALTH INSTRUCTION*

By ELLA DICKMANN CHRISTENSEN, R.N.

The story of how one fifth grade teacher and 40 children lived together through a school year is presented to illustrate how an integrated health program can be carried out. The teacher was Rose Gay Pribble in the Richfield, Minnesota, Public Schools.

Through class discussions early in the year, pupils became interested in the problems of lighting, seating, health examinations, immunization, safety and first aid. Most of the activities were carried on simultaneously, with individuals and committees working on different phases of the program.

Children turned to their science books for information about light and to their health books for facts about the structure, function and care of the eye. Under the guidance of the nurse and teacher, they set up equipment and tested their own vision as a class experience.

Although the school had no physician, nor were there community clinic facilities, discussions in the classroom about health examinations encouraged many children to have medical checkups by their own physicians. As a language arts activity, pupils wrote their own health histories with assistance from teacher, parents and school nurse. This provided a good basis for parent-teacher-nurse conferences. Children who did not go to their doctors did improve their health habits. Others in need of protection against smallpox and diphtheria went to their doctors or to the immunization clinic held by the PTA health committee.

In the area of safety and first aid, the class secured materials from the National Safety Council and from local officials, and made a survey of accidents in their own homes. They also approached the Village Council to find out what was being done to insure proper playing space in the construction of new buildings in the community. The school safety patrol carried on a safety campaign, using appropriate films. A considerable library was developed in connection with the experience and some of this material was used in parent conferences.

Comments from mothers and the pupils themselves indicated improvement in daily health habits with less reminding from parents. Other noticeable results were: developing an inquiring attitude and increasing ability to think; accepting responsibility; becoming more group conscious; respecting individual differences; learning to use resource people and materials.

* Digest of article in Public Health Nursing.

PROGRAM ANNUAL MEETING

AMERICAN SCHOOL HEALTH ASSOCIATION

BOSTON — NOV. 8-10, 1948

Monday, November 8, 1948—

9:30 A. M.

FIRST GENERAL SESSION—*Talbot Hall, Mechanics Building*

Presiding: DAVID VAN DER SLICE, M.D., *President.*

Trends in Health Education
A. O. DEWEESE, M.D.
Kent State University, Kent, Ohio.

Nutritional Appraisals of New York State School Children
FREDERICK J. STARE, M.D.
Harvard School of Public Health, Boston, Mass.

The Physician and the School
DEAN F. SMILEY, M.D.
Consultant in Health and Fitness,
American Medical Association, Chicago, Ill.

Cancer in the School Age Child
SIDNEY FARBER, M.D.
Boston Children's Hospital, Boston, Mass.

Monday, November 8, 1948—

2:30 P. M.

SECOND GENERAL SESSION—*Talbot Hall, Mechanics Building*

Presiding: WILLIAM E. AYLING, M.D., *Vice-President*
Syracuse, N. Y.

Presidential Address
DAVID VAN DER SLICE, M.D.
Consultant in School Health, State Department of Health,
San Francisco, Calif.

Reasons for Lack of Correction of Physical Defects
MARIE E. SWANSON, R.N.
Supervisor of School Nursing,
New York State Department of Education, Albany, N. Y.

Education for Mental Hygiene
WALTER S. HOLMLUND
Supervisor, Mott Visiting Teachers, Flint, Mich.

The Jackson's Mills Conference on Health Education, Physical Education and Recreation
HOLGER F. KILANDER, PH.D.
Assistant Specialist for Health Education, U. S.
Department of Education, Washington, D. C.

Monday, November 8, 1948—
8:00 P. M.

THIRD GENERAL SESSION—*Parlor A, Statler Hotel*

Presiding: DAVID VAN DER SLICE, M.D. and
CYRUS H. MAXWELL, M.D.

The Academy of Pediatrics' Study of Child Health Services
JOHN P. HUBBARD, M.D.
Director, American Academy of Pediatrics, Washington, D. C.

School Lighting
C. L. CROUCH
Technical Director, Illuminating Engineering Society,
New York City

St. Louis Study on Vision Testing
FRANKLIN M. FOOTE, M.D.
Executive Director, National Society for the Prevention of
Blindness, New York City

Use of Well Baby Clinic for Teaching Health and Child Care
THOMAS E. SHAFFER, M.D.
Physician, Ohio State University School, Columbus, Ohio

Tuesday, November 9, 1948—

2:30 P. M.

JOINT SESSION—*Paul Revere Banquet Hall, Mechanics Building*

American School Health Association, and the Dental Health Section of the American Public Health Association

Presiding: GEORGE A. NEVITT, D.D.S. AND DAVID VAN DER SLICE, M.D.

A Good Dental Health Program
A. HARRY OSTROW, D. D. S., *Director*
Bureau of Dental Service, District of Columbia

The Caries Problem of the School Child
KENNETH A. EASKLICK, D.D.S.

Dental Caries Research Findings in a School Dental Program
WALTER J. PELTON, D.D.S.

The School Physician and the School Dental Health Problem
WILLIAM E. AYLING, M.D., *Health Director*
Syracuse, N. Y.

Wednesday, November 10, 1948—
9:30 A. M.

JOINT SESSION—*Talbot Hall, Mechanics Building*

American School Health Association, and the Food and Nutrition Section of the American Health Association

Presiding: MARJORIE M. HAZELTINE AND DAVID VAN DER SLICE, M.D.

The Relation of Nutrition to Infection in Children
JUNIUS M. HAWLINGS, M.D.

Nutrition Study of a Group of Burlington, Vermont, School Children
H. B. PIERCE, JOHN H. BROWN, M.D., R.F. KRAUSE, SUSAN B. MORROW, AND C. A. NEWHALL

Nutritional Reconditioning of Malnourished Children
ELSIE MOYER

Discussion: Educational Implications of Clinical and Research Findings
ELIZABETH LOCKWOOD, Ph.D.

Wednesday, November 10, 1948—
6:30 P. M.

DINNER SESSION—*Salle Moderne, Statler Hotel*

Presiding: DAVID VAN DER SLICE, M.D., *President*

Presentation of the William A. Howe Award to—
AMOS L. BEAGHLER, M.D.
and
SALLY LUCAS JEAN

Response: DR. BEAGHLER

Response: MISS JEAN

Dinner Speaker: HERMAN E. HILLEBOE, M.D.
Commissioner of Health, New York State, Albany, N. Y.

Thursday, November 11, 1948—
9:30 A. M.

JOINT SESSION—*Talbot Hall, Mechanics Building*

American School Health Association, and the Maternal and Child Health Sections of the American Public Health Association

Presiding: A. L. VAN HORN, M.D., JESSIE M. BIERMAN, M.D., AND DAVID VAN DER SLICE, M.D.

Physically Handicapped Children of School Age—Meeting Their Mental, Emotional, Social and Physical Needs
As Seen by an Educator
As Seen by a Medical Administrator
SAMUEL M. WISHIK, M.D.

Children With Special Problems—
A Report by the National Tuberculosis Association by Members of the Committee,
CHARLES C. WILSON, M.D., *Chairman;* GEORGE M. WHEATLEY, M.D., HERBERT M. EDWARDS, M.D., VIVIAN DREUCKHAHN

Discussion: Opened by
JESSIE M. BIERMAN, M.D., AND DOROTHY NYSWANDER, Ph.D.

* * * * *

Health Examinations,—Physicians and patients have been aware for many years of the importance of periodic examinations. Early diagnosis and application of the "stitch in time" work wonders in tuberculosis, cancer, diabetes, heart disease, hypertension and most other chronic diseases. In most physicians' offices health examinations take time, frequently one or two hours. Few patients could bear the financial burden of the time taken. If the physician habitually contributed the extra time this eventually would become a burden.

Now the Joint Committee on Health problems in Education of the National Education Association and the American Medical Association suggest (a) that health examinations of school children be done routinely at this healthiest period of their lives only every three years; (b) that the parent accept the responsibility for furnishing the health history; (c) that the teacher take the responsibility for such tests as height, weight, vision and hearing; (d) that the parent or nurse be present at the examination in order to take prompt steps to follow up the discovery of defects with remedial action, and (e) that the physician devote only fifteen minutes of his time to making those tests and observations which obviously demand medical experience and judgment. Editorial: Journ. A.M.A., May 15, 1948. p. 244.

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EDITORIALS

Among the Abstracts and Notes of this issue are several items concerning immunizations and vaccinations.

One finishes reading these with at least two distinct impressions:

1. Science — especially perhaps medical science — still is clouded by a considerable amount of hearsay (not to say superstition)—and

2. There is not yet definite unanimity of ideas or practices in this field of medicine.

When we add to these published differences the fact that some practitioners in the field of pediatrics are advising mothers to pursue procedures quite at variance with the best opinion of those who are intensively trained and experienced in the field of Public Health, we have "confusion worse confounded."

Some disagreement in medicine and public health is to be expected, and is advantageous in that it pushes those in these fields into study and research. In many cases the amount of disagreement is not great, but it does offer platforms from which those opposed to modern medical and health efforts may spread their superstitions and propaganda before the unknowing public.

Unfortunately many people are so naive and ignorant that they believe anything they read, regardless of its source. The

theory that "it must be so because I saw it in the paper (or magazine)" causes an enormous amount of faulty and harmful practices. If we did not have to spend so much time and energy trying to excavate from clouded and obstinate minds the false ideas imbedded by false advertising, we could make much more rapid progress in Health Education.—*C. H. K.*

* * * * *

With this issue of the *Journal* we start a new school year — a new opportunity.

An opportunity to apply the new ideas and practices, which we have recently acquired by study, observation and attendance at summer school sessions, is presented. To this writer certain needs stand out. More careful examination and protection for those participating in competitive sports, whether intramural, interscholastic or community is a great need. Better and more scientific health education is another. The educational strides and the technical information in this field, both as to materials and as to methods, have been enormous in the last few years. Our procedures in the school health services need constant checking and improvement. Not the least of the needs in these services is more careful physical examinations, more accurate records and more vigorous efforts to secure correction of the discovered deviations from normal.

We need, too, constantly to guard against any effort to interpose any Board, Bureau, or other obstacle between the schools and the parents, on the one hand, and local self government by and through the Board of Education on the other. In many areas of our country the effort to do this is constant, vigorous, and well financed.

Whether there is any force back of these efforts other than a selfish desire for self aggrandizement and an eager grasping for power we do not attempt to say, but the recent publicity regarding what is claimed to be an effort to muzzle or eliminate an educational effort designed for the welfare of our country makes us wonder.

The repeated efforts of Federal Bureaucrats to increase their power is alarming. The latest is the recommendation to put the National Guard under Federal Control—even in peace time. Two purposes seem to underlie this: The desire of the brass hats for more power, and the creation of more jobs and higher ranking for regular army officers.

Let us never forget that a democracy rests and must rest on local and educational control, particularly of our schools.—*C. H. K.*

MEETING

The **California Division of the American School Health Association** held its annual meeting and spring conference at Los Angeles, May 8, 1948.

An excellent program was given divided into a morning and afternoon session.

Just before the noon-day luncheon the annual business meeting was held, including the election of officers. The following officers were chosen for the ensuing year:

President, G. G. Wetherill, M.D., San Diego; *Vice-President,* B. R. Riedel, D.D.S., Los Angeles; *President-Elect,* Richard G. Soutar, M.D., Sacramento; *Secretary,* Mrs. Vera Mowbray, P.H.N., San Diego; *Treasurer,* Mrs. Frances Miller, Los Angeles.

By a practically unanimous vote the following resolution was adopted: (Only one vote of nearly 300 was negative).

This was passed unanimously at the meeting on May 8th:

RESOLUTION

"Whereas, The general trend in the administration of the health program in schools is toward the recognition that all phases of the school program have important and indispensable contributions to make to the health education of the child, and whereas such activities are fundamentally educational in function, and, therefore, the responsibility of the educational authorities; and,

"Whereas, There are dangers to the freedom of the public schools in trends which would divide the responsibility for the conduct of school functions with other agencies whose controlling purpose is not the provision of a well-rounded and balanced educational program; be it therefore resolved:

"1. That the school health program should be under the full control of the local board of education, with the closest co-operation of other health agencies of the community, state and nation, and that as far and as rapidly as local conditions permit the entire school health program, including health services, should be brought under the administration of the local board of education, mediated or supervised where necessary by the county superintendent of schools.

"2. That the recent action of the United States Commissioner of Education in establishing the office of Chief Administration of School and College Health Service is a commendable and constructive action; and that the Commissioner of Education should be urged to use this office to encourage the formation and strengthening of school health programs in state departments of education and under local boards of education."

ABSTRACTS AND NOTES

THE SCHOOL NURSE AND THE POLIO CHILD*

By HART E. VAN RIPER, M.D.

Medical Director of the National Foundation for Infantile Paralysis.

When a child who has had poliomyelitis leaves the hospital, responsibility for his after-care is shared by the home, school, health and welfare agencies, working in co-operation with the physician and clinic. An indispensable member of this team is the school nurse, who occupies a position between lay and professional workers.

Whether or not a nurse has had training in orthopedics, information is available* to her and should be part of her preparation for school nursing. There are many sources through which she may acquaint herself with state and community facilities for polio care, among them the local health department and local chapter of the National Foundation for Infantile Paralysis.

The nurse charts her course before polio appears and alerts the teacher to watch closely for symptoms which can often be mistaken for other childhood diseases. These symptoms at the outset may be difficult to diagnose. A cold, headache, nausea, diarrhea or constipation, sometimes a slight fever, are sufficient reasons to send a child home to bed and to suggest immediate medical attention — always, of course, without exciting alarm. Nurse and teacher should also watch for fatigue and listlessness, accompanied by nervousness and apprehension. More pronounced symptoms are trembling of the hands and other parts of the body and pain and stiffness in the neck and back.

When a child contracts polio, the nurse should watch for symptoms in other children for a period of 10 to 14 days. Even a slight cold is reason for putting one of these children to bed.

Today almost all cases are hospitalized, but if the patient is treated at home, the school nurse can assist the visiting nurse in helping patient and family through convalescence and the period of follow-up care. The nurse interprets to the teacher the post-polio record. In co-operation with the clinic, both nurse and teacher should see that rehabilitation measures are carefully carried out.

In consultation with his teacher, parents and visiting nurse, careful plans for the disabled child's re-entry to school will smooth the way to his physical and emotional readjustment. While every

* Digest of article in Public Health Nursing.

provision should be made for his safety, learning to help himself is such a child's salvation. His schoolmates can also be guided in accepting his limitations without self-consciousness. The teacher and school nurse can co-operate in vocational guidance of the handicapped young person who must seek an occupation within his physical limitations.

The patient who recovers without any apparent disability should be under observation for at least two years. The watchful attention of nurse and teacher and a physical examination every six months will prevent any belated residual effects from going undetected. In the years of rapid growth from 8 to 12, possibilities are greater for developing defects from weakened muscles.

Part of the attack against polio in the past ten years has been a program of public education. Panic has been largely dispelled through distribution of facts about the disease and the assurance that financial aid, when needed, will be provided patients through the March of Dimes.

People have also learned respect for precautionary measures and the importance of prompt and thorough treatment. Through her contacts with the public, the school nurse can help share this knowledge*

* Free literature about poliomyelitis and its treatment may be secured by writing to the National Foundation for Infantile Paralysis, 120 Broadway, New York 5, N. Y.

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Immunizations,—To the Editor: What is the recommended routine for dosage, time of administration and time of booster dose, in immunization against pertussis, diphtheria, tetanus and smallpox? Harry W. Orris, M.D., Brooklyn.

ANSWER—Usually it is recommended that inoculations for the prevention of pertussis should not be given until after the sixth month of life. It is often claimed that there is little antigenic response before that time.

Dosage depends on the vaccine selected. One pertussis vaccine contains 15 billion inactivated organisms per cubic centimeter, and injections of 1, 2 and 3 cc. are made at from four to six week intervals. The total amount of vaccine given contains 90 billion organisms. Another vaccine given contains only 10 billion organisms to 1 cc., and the total dose is 55 billion. Protection when established may last for approximately two years: after that time, unless there are exceptional circumstances, reimmunization against whooping cough is seldom undertaken. However, if it is desired, 1 cc. of pertussis vaccine could be injected about two years after the initial prophylactic treatments.

Immunization against diphtheria and tetanus can be undertaken any time after the child is six months of age, although nine months of age is a more appropriate time. If diphtheria and tetanus toxoids are combined and the alum-precipitated preparation is used, two injections of 1 cc. each with an interval of six weeks is now considered satisfactory. After immunization has been established, as little as 0.1 cc. of tetanus toxoid, alum-precipitated, may be given as a booster dose once every two years or annually as desired. In case of injury, if more than six months have elapsed since inoculations were made against tetanus, 0.5 cc. of tetanus toxoid, alum-precipitated, should be administered immediately following the injury.

Vaccination against smallpox is best performed according to the multiple pressure method. If the baby is in good health and has no dermatologic condition, he may be vaccinated between the ages of three and six months. Vaccination before the completion of the first year of life is commonly advised. Revaccination should be performed when the child enters school at about six years of age. A third vaccination may be undertaken when grammar school is completed. Journ. A.M.A., July 10, 1948. p. 1001.

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Smallpox Vaccination.—To the Editor: In accordance with Navy practice, I maintain that if the result of vaccination is "primary" (or "take") the patient should be revaccinated seven to ten days later in order to ascertain whether the original vaccination stimulated complete or partial immunity. If the second vaccination results in an "accelerated" reaction, I should revaccinate until an immune response occurs. I contend that all patients who do not show an "immune" reaction should be revaccinated at seven to ten day intervals until an "immune reaction" occurs. My colleagues contend that a "primary" reaction (one vaccination) is adequate for protection. Please discuss.

ANSWER—Theoretically your contention is correct that a person who is not susceptible to an attack of smallpox should have an immune reaction when vaccinated with potent smallpox vaccine. Actually the procedure which you suggest is neither practical nor necessary. If an unvaccinated susceptible person is vaccinated within three days of exposure to smallpox and the vaccination is successful it is almost absolutely certain that smallpox will not develop. Instances of this kind have been observed repeatedly in a smallpox hospital.

A successful vaccination in a person who has not been vaccinated successfully at any previous time is termed a "primary vac-

cination". If vaccination is repeated there should be a reaction of immunity. The duration of immunity resulting from a primary vaccination cannot be foretold accurately. Ordinarily a primary vaccination will afford protection against smallpox from five years to life. A loss of immunity can be determined by obtaining either another successful vaccination or an accelerated reaction. In considering an immune reaction it must be remembered that a proper interpretation rests on the knowledge that the vaccine lymph used in the procedure is potent. A "no take" or failure to secure any reaction from a vaccination should not be confused with an "immune reaction". Journ. A.M.A., May 15, 1948. p. 328.

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Smallpox Vaccination,—To the Editor: Vaccination of a boy aged 22 months against smallpox did not take. His mother states that she was vaccinated against smallpox when she was six months pregnant. Is it possible that the boy acquired temporary immunity through his mother's vaccination? When should the boy be revaccinated? Frederick E. Ems, M.D., Petaluma, Calif.

ANSWER—It should always be assumed that a successful vaccination can be obtained on anyone who has never had a successful vaccination; the only exception to this rule might be a person who has had an attack of smallpox. It is extremely doubtful that the infant acquired temporary immunity because the mother was vaccinated during pregnancy. Moreover, it would be interesting to know whether the mother's vaccination was successful. Further attempts should be made to secure a successful vaccination on the baby and perhaps also on the mother. This could be done at any convenient time, but preferably during cool seasons rather than in the summer months.

Theoretically the only reliable method to determine immunity to smallpox would be to secure a reaction of immunity when a vaccination is attempted. When designating a vaccination as a reaction of immunity, one must be certain that the vaccine is potent. If the vaccine is potent there should always be one of three reactions: (a) a successful vaccination, (b) a vaccinoid or accelerated reaction; or (c) a reaction of immunity. If there is no reaction whatever, it should signify that the vaccine is not potent or that some flaw has occurred in the technic. Journ. A.M.A., July 10, 1948. p. 1001.

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Scarlet Fever Immunization.—To the Editor: How effective is scarlet fever streptococcus toxin (as Wyeth's) in preventing scarlet fever? Does it prevent the complications of scarlet fever?

Are there any disadvantages or contraindications against active immunization against scarlet fever? M.D., New Mexico.

ANSWER—Scarlet fever streptococcus toxin is of undoubted value for the prevention of the classic form of scarlet fever. Scarlet fever toxin when given in proper dosage will establish immunization against the rash of scarlet fever but does not immunize the recipient against infection with scarlet fever streptococci. Although scarlet fever streptococcus toxin when given for active immunization may prevent toxic manifestations of the disease, it does not eliminate the possibility of suppurative complication. Occasionally there is some unpleasant reaction following the administration of scarlet fever toxin when immunization procedures are carried out.

If a patient is immunized against the toxic manifestations of scarlet fever, including the rash, the necessity for isolation of such a patient when he has an acute case of pharyngitis due to scarlet fever streptococci is not appreciated. Therefore, it might be assumed that persons inoculated with scarlet fever toxin could become a hazard to a community: although they harbored scarlet fever streptococci they would have no rash and consequently would not be isolated. Therefore, they might transmit clinical scarlet fever to non-immunized persons. Journ. A.M.A., June 5, 1948. p. 569.

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Recommended Schedule of Immunizations

County Health Department Adopts Table of Procedures Based on Best Present Day Practice; Schedule is Published for Guidance of All Physicians

The Erie County Department of Health has drawn up and put into operation in the Department's Infant and Pre-School Clinics a recommended schedule of immunizations for children. In the belief that this recommended schedule would be of interest and help to general practitioners of Erie County, County Health Commissioner Berwyn F. Mattison has requested publication of the same in *The Bulletin.*

"The schedule was drawn up with the advice and help of our Consultant Pediatrician, Dr. Douglas P. Arnold, and I think represents the present day practice in most public health departments," Commissioner Mattison told *The Bulletin.* "The necessity for booster doses of diphtheria toxoid; the need for whooping cough vaccination *early* where the mortality is highest; the need for re-

vaccination against smallpox; and the availability and need for gamma globulin administration in certain infant cases of measles are probably the points that would be of most interest to the general practitioner."

The recommended schedule of immunization is as follows:

Whooping Cough

Three doses of two, three and three ml. of whooping cough vaccine, New York State Phase I, new type, administered at two to four weeks intervals and started at three months of age. For continued immunity a booster dose may be administered at age two or three years.

Limited quantities of anti-pertussis rabbit serum are available for treatment of cases of whooping cough in infants under one year of age. Therapeutic dose is 10 ml. repeated if necessary. For prophylaxis five to ten ml. may be used for household contacts under one year of age. At present time State does not furnish anti-pertussis serum for prophylactic use.

CAUTION: It is desirable to test for sensitivity to rabbit serum before using.

Diphtheria

Two injections each of one ml. of alum precipitated toxoid given approximately four weeks apart, started at six months of age. A booster dose of five ml. should be given at the time of first entering school.

Smallpox

Vaccination against smallpox should be done before child reaches one year of age.

Revaccination at five year intervals is recommended.

Measles

Human Immune Serum Globulin (gamma globulin) is available in limited quantities for the protection of children from five months to four years of age who have been exposed to measles. Children under five months of age usually receive natural immunity from mothers who have had measles.

In general, two ml. of material, if given intramuscularly before the eighth day after exposure, will prevent development of the disease in almost 75% of young children, and will decidedly modify it in the remainder.

Note:

The Department does not recommend the use of streptococcus antiserum. *Bulletin*, The Medical Society of the County of Erie, N. Y.

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MEETINGS

American School Health Association and the American Public Health Association Annual Meeting at Boston, Mass., November 8-11, 1948.

American School Health Association Headquarters—Hotel Statler.